



***Thermus aquaticus* RecA Protein**

BACKGROUND

***Thermus aquaticus* RecA protein** is a thermostable enzyme which plays important roles in homologous recombination and DNA repair. This protein has activities of single-stranded DNA dependent ATPase, DNA annealing, and exchanging of strands between two recombining DNA double helices, similar to *E.coli* RecA protein, but the optimal temperature is between 65-75°C (1). Taq RecA was expressed in *E.coli* in large quantities and the protein was highly purified. MW is 36.5kD.

Applications:

- 1) Useful for studying homologous recombination
- 2) Increase the specificity and yield of multiplex PCR (of cDNA or genomic DNA) by promoting homologous annealing of primers to target DNA (2)
- 3) Visualization of DNA with electron microscopy due to nucleofilament formation.

Size: 100 µg

Form: 1 mg/ml in 50mM Tris-HCl (pH 8.0), 200mM NaCl, 1mM EDTA, 50% glycerol

Activity: The activity of single-stranded DNA-dependent ATPase was confirmed.

Quality Assurance: Single-strand dependent ATPase activity.
Greater than 90% of protein determined by SDS-PAGE (CBB staining) (Fig.1)
The absence of endonucleases and exonucleases was confirmed.

Data Link: UniProtKB/Swiss-Prot [P48296](#) (RECA_THEAQ) [P48296](#)

Storage: Store at -20°C

References:

- 1) Angov E & Camerini-Otero RD (1994) "The recA gene from the thermophile *Thermus aquaticus* YT-1: cloning, expression, and characterization." *J.Bacteriol.* **176**: 1405-1412 PMID: [8113181](#)
- 2) Shigemori Y *et al* (2005) "Multiplex PCR: use of heat-stable *Thermus thermophilus* RecA protein to minimize non-specific PCR products." *Nucleic Acids Research* **33**: e126 PMID: [16087733](#)

Related Products

BAM-01-001-EX	E.coli RecA Protein
BAM-10-001-EX	Rad51 Protein (human)
BAM-10-003-EX	Rad52 Protein (human)

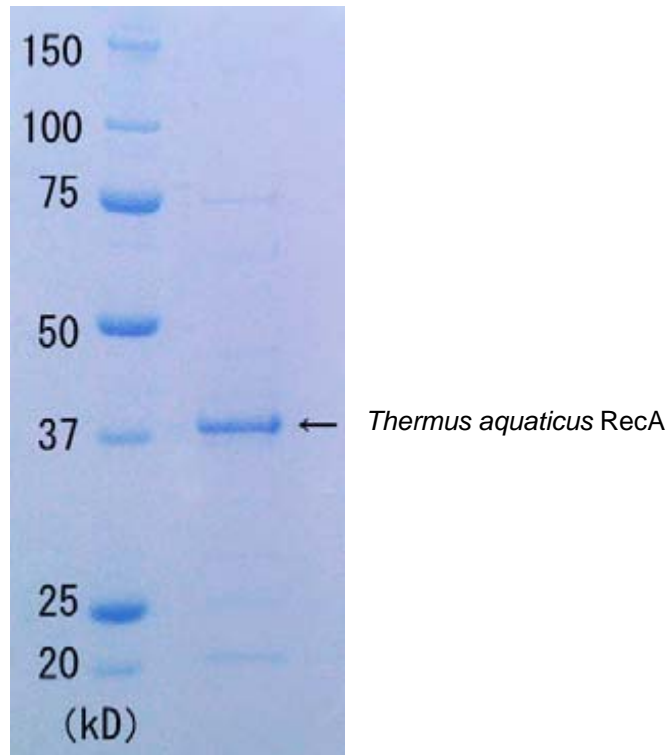


Fig1. SDS-PAGE of *Thermus aquaticus* RecA protein

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